



# Volunteer Lake Assessment Program Individual Lake Reports

## DUBLIN POND, DUBLIN, NH

### MORPHOMETRIC DATA

Watershed Area (Ac.):	750	Max. Depth (m):	31.1	Flushing Rate (yr <sup>-1</sup> )	0.2
Surface Area (Ac.):	239	Mean Depth (m):	10.1	P Retention Coef:	0.84
Shore Length (m):	4,500	Volume (m <sup>3</sup> ):	9,798,500	Elevation (ft):	1479

### TROPHIC CLASSIFICATION

Year	Trophic class
1991	OLIGOTROPHIC
2001	OLIGOTROPHIC

### KNOWN EXOTIC SPECIES

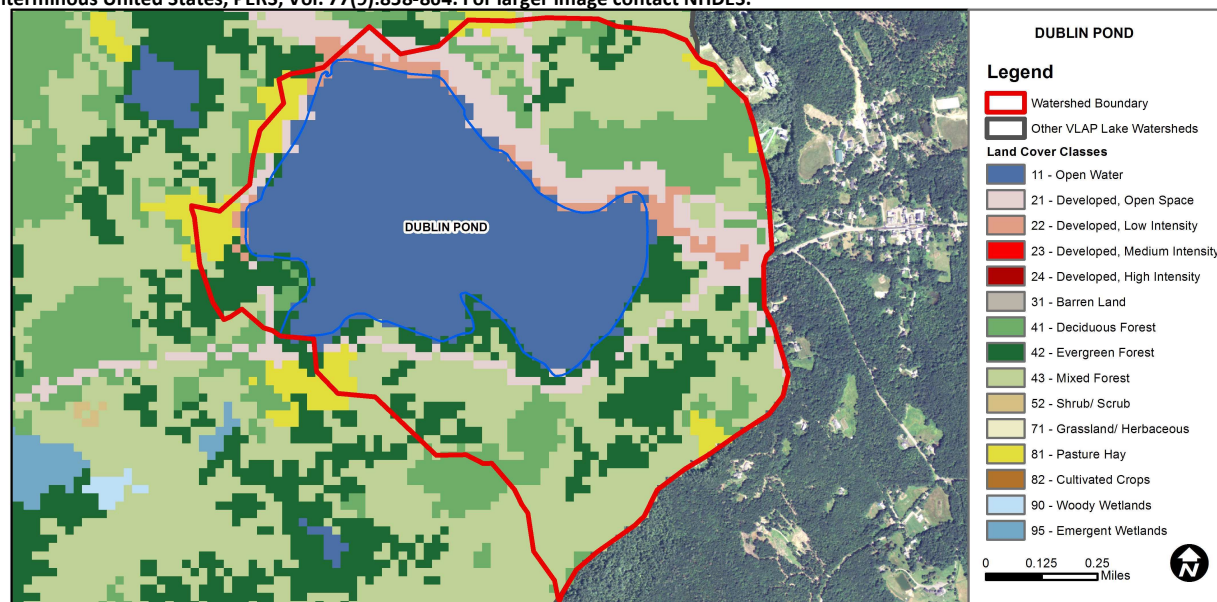
Variable Milfoil

The Waterbody Report Card tables are generated from the 2012 305(b) report on the status of N.H. waters, and are based on data collected from 2001-2011.

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Good	>=5 samples and median is < threshold but > 1/2 threshold value.
	pH	Bad	>10%, with a minimum of 2, samples exceed criteria, with 1 or more by a large margin.
	D.O. (mg/L)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	D.O. (% sat)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	Chlorophyll-a	Very Good	>5 samples and median is < 1/2 threshold.
Primary Contact Recreation	E. coli	Good	Geometric means < criteria; however at least 1 exceedance of the single sample criteria occurred.
	Chlorophyll-a	Very Good	At least 10 samples with 0 exceedances of criteria.

### WATERSHED LAND USE SUMMARY

Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.



Land Cover Category	% Cover	Land Cover Category	% Cover	Land Cover Category	% Cover
Open Water	34.6	Barren Land	0	Grassland/Herbaceous	0
Developed-Open Space	10.1	Deciduous Forest	11.18	Pasture Hay	3.3
Developed-Low Intensity	2.82	Evergreen Forest	13.45	Cultivated Crops	0
Developed-Medium Intensity	0	Mixed Forest	24.63	Woody Wetlands	0
Developed-High Intensity	0	Shrub-Scrub	0	Emergent Wetlands	0



# VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS

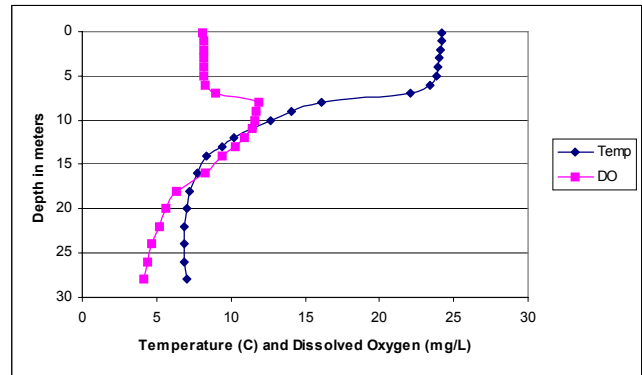
## DUBLIN LAKE, DUBLIN NH

### 2012 DATA SUMMARY

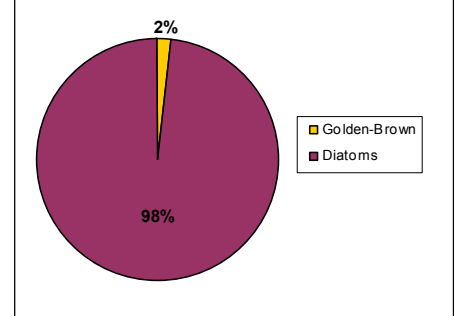
#### OBSERVATIONS AND RECOMMENDATIONS (Refer to Table 1 and Historical Deep Spot Data Graphic)

- CHLOROPHYLL-A:** Chlorophyll levels were very low in 2012 and have remained stable since monitoring began.
- CONDUCTIVITY/CHLORIDE:** Deep spot conductivity and chloride were levels slightly elevated. Conductivity elevated at multiple stations around the lake. Rt. 101 runs alongside the lake and road salting likely influences conductivity and chloride levels.
- E. COLI:** E. coli levels were very low at every station except Fill Spencer where they were elevated above the state standard for surface waters.
- TOTAL PHOSPHORUS:** Phosphorus levels were elevated at the following stations following 0.25-0.50 in. rain events: Fill Spencer, Latchis Cove, Latchis Beach East, Merryman Rd., and Stonelea Driveway. Deep spot phosphorus levels were very low.
- TRANSPARENCY:** Transparency was well above the average for most NH lakes, however was much lower in 2012 than previous years.
- TURBIDITY:** Turbidity was elevated at Aldridge, Merryman Rd. and Stonelea Driveway in June following a storm event.
- pH:** pH was low at Julie Crocker Culvert, Oak Hill and Oak Hill East stations. Deep spot pH decreases to undesirable levels in the hypolimnion (lower water layer).
- RECOMMENDED ACTIONS:** Monitor chloride concentrations at various tributary stations around the lake. Address stormwater runoff from several stations with elevated phosphorus and E. coli concentrations after storm events. The "Homeowner's Guide to Stormwater Management" provides useful best management practices to control stormwater runoff.

#### Dissolved Oxygen & Temperature Profile



#### Dublin Lake Phytoplankton Population



Station Name	Alk.	Chlor-a	Chloride	Cond.	E. Coli	Total P	Trans.		Turb.	pH
	mg/l	ug/l	mg/l	uS/cm	#/100ml	ug/l	m		ntu	
							NVS	VS		
Aldridge				88.9	20	12			2.29	6.76
Barney Road					10	8				
Boat Landing					10	6				
Catlin Culvert					10	8				
Cemetery Cove				21.0	10	3			0.37	6.06
Culvert East				44.6	20	6			1.06	6.5
Culvert West					10	3				
Dublin Lake Club					10	3				
Culvert Spencer					10	20				
Deep Epilimnion	4.2	1.51	17	75.4		3	5.45	6.55	0.85	6.99
Deep Metalimnion				75.9		5			0.83	6.96
Deep Hypolimnion				78.7		5			0.75	6.35
Eaves				86.8	30	11			1.88	6.68
Fernlea Road				101.6	10	7			1.02	6.03
Fill Spencer					1780	28				
Highfield Road				76.0	10	3			0.37	6.24
Julie Crocker Culvert				35.0	10	3			0.15	5.45
Korpi Culvert					10	15				
Latchis Beach East				72.3	10	46			0.95	6.12
Latchis Cove					10	36				

Station Name	Alk.	Chlor-a	Chloride	Cond.	E. Coli	Total P	Trans.		Turb.	pH
	mg/l	ug/l	mg/l	uS/cm	#/100ml	ug/l	m		ntu	
Lonetree					10	3				
Lonetree Road Sign					10	5				
Loon Point East					10	3				
Merryman Rd				182.3	10	115			4.89	6.62
Oak Hill				26.8	10	8			0.61	5.48
Oak Hill East				20.8	10	7			0.22	5.72
Old Harrisville Road					10	3				
Outlet Spencer				74.7	10	6			0.77	6.92
Skyleau					10	13				
Stonelea Driveway				152.5	10	43			14.8	6.92
Womens Club					10	5				
Wright Culvert					20	15				

#### HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation
Chlorophyll-a	N/A	Additional data necessary for trend analysis.
Transparency	N/A	Additional data necessary for trend analysis.
Phosphorus (epilimnion)	N/A	Additional data necessary for trend analysis.

This report was generated by the NH DES Volunteer Lake Assessment Program (VLAP). For more information contact:  
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#### Historical Deep Spot Chlorophyll-a, Epilimnetic Total Phosphorus & Transparency Data

